

CLAIMS

We claim:

1. A method of making an elevator belt assembly having a plurality of cords within a jacket, comprising the steps of:

(a) aligning the plurality of cords in a selected arrangement;

(b) applying a selected jacket material to the cords to encase the cords in the jacket with a generally smooth, uninterrupted surface on an exterior of the jacket that is adapted to contact sheaves in an elevator system; and

(c) maintaining a selected tension on the cords, respectively, while applying the jacket such that the tension on the cords controls positions of the cords within the jacket and the cords are uniformly spaced from the generally smooth, uninterrupted surface on the jacket along the length of the belt assembly.

2. The method of claim 1, including maintaining different tensions on different ones of the cords.

3. The method of claim 1, including performing steps (a) through (c) to make a sample belt assembly;

inspecting the sample belt assembly;

determining whether a configuration of the sample belt assembly is consistent with a desired configuration; and

adjusting the tension maintained on at least one of the cords when the determined configuration is not consistent with the desired configuration.

4. The method of claim 3, including repeating the steps of claim 3 until the sample belt configuration is consistent with the desired configuration.
5. The method of claim 1, wherein the jacket material comprises a waxless urethane.
6. The method of claim 5, wherein step (B) includes using a molding device and including cooling at least one of the jacket material or the molding device as the applied jacket and the cords exit the molding device.
7. The method of claim 6, including applying a fluid to the jacket material or the molding device.
8. The method of claim 1, including using a molding device and wherein the molding device has an opening through which the belt assembly proceeds, the opening comprising a non-linear configuration such that a thickness of the jacket exiting the opening varies across the width of the jacket.
9. The method of claim 1, including finishing the exterior of the jacket by forcing the jacket into a shaping device that ensures that the jacket exterior has a desired configuration and cooling the belt assembly.

10. An elevator belt assembly, comprising:

a plurality of cords aligned generally parallel to a longitudinal axis of the belt; and

a jacket over the cords, the jacket including a generally smooth, uninterrupted exterior surface that is adapted to contact other components in an elevator system as the belt moves.

11. The assembly of claim 10, wherein the cords are positioned within the jacket such that a spacing between the cords and the exterior surface is continuous along the length of the belt.

12. The assembly of claim 10, wherein the jacket includes oppositely facing surfaces, at least one of the surfaces having the generally smooth, uninterrupted exterior surface and wherein the oppositely facing surfaces are parallel.

13. The assembly of claim 10, wherein the jacket comprises an ether based polyurethane.

14. The assembly of claim 10, wherein the jacket comprises a waxless polyurethane.

15. An elevator belt assembly made by the process, comprising the steps of:

- (a) aligning a plurality of cords in a selected arrangement;
- (b) applying a selected jacket material to the cords to encase the cords in the jacket with a smooth, uninterrupted surface on an exterior of the jacket that is adapted to contact sheaves in an elevator system; and
- (c) maintaining a selected tension on the cords, respectively, while applying the jacket such that the tension on the cords controls positions of the cords within the jacket and the cords are uniformly spaced from the smooth, uninterrupted surface on the jacket along the length of the belt assembly.

16. The assembly of claim 15, wherein the process includes maintaining different tensions on different ones of the cords.

17. The assembly of claim 15, wherein the jacket material comprises a waxless urethane and wherein step (b) of the process includes using a molding device and including cooling at least one of the jacket material or the molding device as the applied jacket and the cords exit the molding device.

18. The assembly of claim 17, wherein the process includes applying a fluid to the jacket material or the molding device.

19. The assembly of claim 15, wherein the jacket material comprises polyurethane and the cords comprise steel.

20. The assembly of claim 15, wherein the process includes finishing the exterior of the jacket by forcing the jacket into a shaping device that ensures that the jacket exterior has a desired configuration and cooling the belt assembly.

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